

# HMAC and Merkle-Hash-Tree Signatures in ndn-cxx

- SignatureHmacWithSha256: hash-based signature with provenance.
  - defined in NDN Packet Format, implemented in CCL, but missing in ndn-cxx.
- SHA-256-Merkle-Hash-Tree: aggregated signing, individually verifiable.
  - defined in CCNxx 0 packet format, but we should explore this algorithm.
  - When producing many Data packets, the producer only needs to perform one RSA/ECDSA signing, while each Data packet is individually verifiable.
- This project: add HMAC and Merkle hash tree signing/verification.
  - HMAC implementation is intended to be mergeable to the codebase.
- Requirement: understand crypto; can write C++14.